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October 8, 2013

Texas Commission on Environmental Quality
Office of Water
Water Rights Permitting and Availability Division
PO Box 13088
MC-160
Austin, Texas 78711

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WATER SUPPLY DIV.
2013 OCT 11 PM 3 51

Subject: Application for a bed and banks authorization for conveyance of privately-owned groundwater, Magruder Property, Liberty County Texas

Dear Sir or Madam:

Enclosed please find a check in the amount of \$1,011.25 for filing and recording fees associated with the above referenced permit application.

Additional enclosures include an original signed and notarized application form and six copies of the form and supporting materials (Attachments A –E).

Please contact me at (936) 366-0800 or BillGoodrum@forestargroup.com if additional information is required, or if you have any questions. Thank you for your assistance.

Sincerely,

William Goodrum, Sr.
Vice-President

cc:

Mark Loethen
Deputy Director Planning and Development Services Division
Department of Public Works and Engineering
City of Houston

Jun Chung
Deputy Director Public Utilities Division
Department of Public Works and Engineering
City of Houston

Ed McCarthy
Jackson, Sjoberg, McCarthy & Wilson, LLP

B. Location of Structure No. *Not applicable* _____

1) Watercourse: _____

2) Location from County Seat: _____ miles in a _____ direction from _____,
_____ County, Texas.

Location from nearby town (if other than County Seat): _____ miles in a _____ direction
from _____, a nearby town
shown on county highway map.

3) Zip Code: _____

4) The dam will be/is located in the _____ Original Survey No. _____,
Abstract No. _____ in _____ County, Texas.

5) Station _____ on the centerline of the dam is _____° _____ (bearing), _____ feet
(distance) from the _____ corner of _____ Original Survey
No. _____, Abstract No. _____, in _____ County,

Texas, also being at Latitude _____°N, Longitude _____°W.

Provide the Latitude and Longitude coordinates in decimal degrees, to at least six decimal places, and indicate
the method used to calculate the diversion point location.

C. Reservoir: *Not applicable*

1) Acre-feet of water impounded by structure at normal maximum operating level: _____

2) Surface area in acres of reservoir at normal maximum operating level: _____

D. Drainage Area *Not applicable*

The drainage area above the dam is _____ acres or _____ square miles.

E. Other *Not applicable*

1) If this is a U.S. Natural Resources Conservation Service (NRCS) (formerly Soil Conservation
Service (SCS)) floodwater-retarding structure, provide the Site No. _____
and watershed project name _____.

2) Do you request authorization to close the "ports" or "windows" in the service spillway?

☐ Yes ☐ No

3. **Appropriation/Diversion Request (total amount of water needed, including maximum projected
uses and accounting for evaporative losses for off-channel storage, if applicable).**

*Not applicable – No surface water to be appropriated nor diverted. Please see Attachment A
"Evaluation of Groundwater Discharge and Bed and Banks Conveyance, Liberty County, Texas"*

A. Appropriated water will be used as follows: *Not applicable – no surface water to be appropriated*

	Purpose*	Place of Use	Acre-feet per year
1)	N/A	N/A	N/A
2)			
3)			

*If agricultural use, list crops(s) to be irrigated:

B. Lands to be irrigated (if applicable): *Not applicable*

- 1) Applicant proposes to irrigate a total of N/A acres in any one year. This acreage is all of or part of a larger tract(s) which is described in a supplement attached to this application and contains a total of _____ acres in _____ County, Texas. A copy of the deed(s) describing the overall tract(s) with the recording information from the county records is provided in Attachment D.
- 2) Location of land to be irrigated: In the _____
Original Survey No. _____, Abstract No. _____.

C. Diversion Point No. One.

- 1) Watercourse: Anywhere just above or around the perimeter of Lake Houston, Harris County, TX.
- 2) Location of point of diversion at Latitude TBD °N, Longitude TBD °W,
Provide Latitude and Longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location.
Diversion location (s) will be as authorized in Certificate of Adjudication 10-4965.
also bearing _____ ° _____ feet
(distance) from the _____ corner of the _____ Original
Survey No. _____, Abstract No. _____, County, Texas.
- 3) Location from County Seat: Approx 28 miles in a northeasterly direction from
City of Houston, Harris County, Texas.
Location from nearby town (if other than County Seat): _____ miles in a _____
direction from _____, a nearby town shown on county
highway map.
- 4) Zip Code: TBD- several zip codes surround Lake Houston
- 5) The diversion will be (check (√) all appropriate boxes and if applicable, indicate whether existing or proposed):

<input type="checkbox"/> Directly from stream	<input type="checkbox"/> Existing	<input type="checkbox"/> Proposed
<input type="checkbox"/> From an on-channel reservoir		
<input type="checkbox"/> From stream to an off-channel reservoir		
<input type="checkbox"/> From a stream to an on-channel reservoir	As authorized in Certificate of Adjudication 10-496	
<input type="checkbox"/> From an off-channel reservoir		
<input type="checkbox"/> Other method (explain fully, use additional sheets if necessary)	See Attachment A – diversion will be groundwater	See Attachment A – diversion will be groundwater

6) Rate of Diversion (Check (√) applicable provision): - *The anticipated maximum rate of diversion from Lake Houston is 13,828 gpm (East Fork conveyance) or 13,902 gpm (Luce Bayou conveyance); the location and facilities to divert groundwater are to be determined (TBD) – See Attachment A*

TBD 1. Diversion Facility:

- A. _____ Maximum gpm (gallons per minute)
- B. _____ Number of pumps
- C. _____ Type of pump
- D. _____ gpm, Pump capacity of each pump

E. Portable pump _____ Yes or _____ No.

TBD 2. If by gravity:

A. _____ Headgate _____ Diversion Dam _____ Maximum gpm

B. _____ Other method (explain fully - use additional sheets if necessary)

7) The drainage area above the diversion point is _____ acres or _____ square miles.

D. Return Water or Return Flow (location and quantity information, provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places and indicate the method used to calculate the diversion point location):

Water which is diverted but not consumed as a result of the above stated use, will be returned to

N/A _____, tributary of _____

_____, tributary of _____,

_____ Basin, at a point which is at Latitude _____

_____ °N, Longitude _____ °W, also, bearing

_____ (direction), _____ feet (distance) from the

_____ corner of the _____ Original Survey

No. _____, Abstract No. _____, in _____ County, Texas.

Zip Code: _____

Estimated annual amount of return flow to said stream will be _____ acre-feet.

E. Surplus Water (provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places and indicate the method used to calculate the diversion point location):

Water which is diverted but not used beneficially will be returned to N/A _____,

tributary of _____ Basin at a point

which is at Latitude _____ °N, Longitude _____ °W, also

bearing _____ (direction), _____ feet

(distance) from the _____ corner of the _____ Original Survey

No. _____, Abstract No. _____, in _____ County, Texas.

Zip Code: _____

4. Discharge Point Information (if applicable, provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places and indicate the method used to calculate the diversion point location).

This application covers two potential sites at which groundwater would be discharged in watercourse(s) for conveyance as described herein as "East" and "West."

Discharge Point No. or Name: East

Applicant will discharge groundwater at one or two discharge points from the applicant's property watercourse(s) for conveyance to a downstream diversion point : 1) Luce Bayou in Liberty County (East) and 2) East Fork of the San Jacinto River in Harris County (West). Information for the West Discharge Point is provided in Supplemental Discharge Information Sheet. Please see Attachment B for stream segments and Attachment C for photographs of potential discharge points.

A. Select the appropriate box for the source of water being discharged:

☐ Treated effluent

☒ Groundwater

☐ Other _____

B. Location of discharge point will be/is a stream segment extending between approximately Latitude

30.132312° N, Longitude 95.072838°W and Latitude 30.118574° N, Longitude 95.058467°W,
also bearing _____° _____, _____ feet from the _____ corner of the _____
Original Survey No. _____, Abstract No. _____, in _____
Liberty _____ County, Texas.

What method was used to determine the Latitude and Longitude for the discharge point? (i.e., GPS Unit, USGS 7.5 Topographic Map, etc.)

Exact location of the groundwater discharge point(s) has not been identified; however, the coordinates for the northern and southern points of the stream segment for the East discharge points were identified by projecting a USGS 7.5 Minute Topographic Map layer in the NAD 1983 coordinate system in ArcGIS. Points (shapefile) were then assigned to the upstream and downstream locations of the stream segment and latitudinal and longitudinal values were calculated using the 'Calculate Geometry' function in ArcGIS. Attachment B provides a USGS topographical map showing stream segments within which the discharge point (s) will be located.

- C. Location from County Seat: Approximately 16.25 miles in a northwesterly direction from Liberty (county seat) _____, Liberty _____ County, Texas.

Location from nearby town (if other than County Seat): _____ miles in a _____ direction from _____, a nearby town shown on county highway map.

- D. Zip Code: 77535

- E. Water will be discharged into Luce Bayou stream/reservoir, (tributaries) San Jacinto Basin.

- F. Water will be discharged at a maximum rate of 31.22 cfs (14,000 gpm).

- G. The amount of water that will be discharged is up to 10,000 acre-feet per year.

- H. The purpose of use for the water being discharged will be municipal, industrial, steam electric, hydro-electric, mining and oil and gas, recreation, instream and environmental, and irrigation

- I. Additional information required:

For groundwater *Please see Attachment A*

- 1) Provide water quality analysis and 24 hour pump test for the well if one has been conducted. *Drilling of a test was initiated during August 2013; however, water quality analysis and pump test reports have not been completed as of date of application submittal. Results will be provided prior to discharge if requested.*
- 2) Locate and label the groundwater well(s) on a USGS 7.5 Minute Topographic Map. See *Attachment B.*
- 3) Provide a copy of the groundwater well permit if it is located in a Groundwater Conservation District. *Liberty County is not located within the jurisdiction of a groundwater conservation district.*
- 4) What aquifer the water is being pumped from? *Groundwater will be produced from the Evangeline Aquifer, part of the Gulf Coast aquifer system.*

For treated effluent *Not applicable*

- 1) What is the TPDES Permit Number? Provide a copy of the permit.
- 2) Provide the monthly discharge data for the past 5 years.
- 3) What % of treated water was groundwater, surface water?
- 4) If any original water is surface water, provide the base water right number.

5. General Information. To Be Determined

- A. The proposed or existing diversion works will be (are) located on the land of: anywhere just above or around the perimeter of Lake Houston. Landowner information will be provided at such time as the

exact diversion point is identified and prior to construction (if required) or actual diversion of the groundwater, whose mailing address is _____

- B. If an application for the appropriation is granted, either in whole or in part, construction works will begin within TBD after such permit is issued. The proposed work will be completed within _____ from the date the permit is issued.
- C. A Water Conservation Plan is attached? _____ Yes ☒ No. (Water supply agreement with purchaser will require customer to have compliant conservation and drought management plans. The required plans will be submitted prior to discharge and diversion.
- D. ☒ Interbasin transfer is not requested. Not Applicable for a groundwater bed and bank transport application.

____ Applicant requests authorization to transfer _____ acre-feet of water per year from the _____ Basin to the _____ Basin of which _____ acre-feet of water will be used for _____ purposes and _____ acre-feet of water will be used for _____ purposes.

- E. ☒ Bed and Banks request to transfer up to 10,000 acre-feet of water per year within the bed and banks of East Fork of San Jacinto River or Luce Bayou (as described in Attachment A), tributary of San Jacinto River. San Jacinto Basin.
- F. Is this project located within 200 river miles of the coast? ☒ Yes _____ No _____ Unknown
Note: This project does not involve any state water subject to Chapter 11, Texas Water Code.

5. Maps, plats, plans, and drawings accompany this application as required by applicable TAC Sections.

☒ Yes _____ No. Attachment B (USGS map) and Attachment C (photographs representative of discharge sites)

6. N/A The dam(s) and reservoir(s) shown on the attached application was (were) constructed for domestic and livestock purposes and I/we elect to seek a permit under Section 11.143 of the Texas Water Code.
7. Provide information describing how this application addresses a water supply need in a manner that is consistent with the state water plan or the applicable approved regional water plan for any area in which the proposed appropriation is located or, in the alternative, describe conditions that warrant a waiver of this requirement.

This water supply is available to augment existing supplies to meet current and projected municipal, industrial, steam-electric, hydro-electric, mining and oil and gas, recreation, instream and environmental, and irrigation water demands. Because the bed and banks request is to convey privately owned groundwater and not surface water, provisions of Chapter 11, including §11.134 (c), Texas Water Code, do not generally apply.

W B Goodrum, Jr.

Applicant Name (Sign)

William B. Goodrum, Sr.

Applicant Name (Sign)

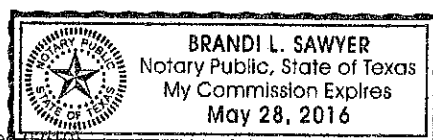
William Goodrum, Sr.

acting in his capacity as Vice-President, for Forestar (USA) Real Estate Group, Inc., the Applicant/Owner

Applicant Name (Printed)

Applicant Name (Printed)

SWORN TO AND SUBSCRIBED before me this 8th day of October, 20 13.



Brandi L. Sawyer
Notary Public for the State of Texas

Supplemental Discharge Point Information Sheet

Discharge Point No. or Name: West

Applicant will discharge groundwater at one or two discharge points from the applicant's property watercourse(s) for conveyance to a downstream diversion point : 1) Luce Bayou in Liberty County (East) and 2) East Fork of the San Jacinto River in Harris County (West). Information for the East Discharge Point is provided in the main body of the application (Section 4) . Please see Attachment B for identified stream segments and Attachment C for photographs of potential discharge points.

- 1) Select the appropriate box for the source of water being discharged:

☐ Treated effluent

☒ Groundwater

☐ Other _____

- 2) Location of discharge point will be a stream segment extending between approximately Latitude 30.123978° N, Longitude 95.131409°W and , Latitude 30.112945° N, Longitude 95.138950°W

also bearing _____ ° _____, _____ feet from the _____ corner of the _____

Original Survey No. _____, Abstract No. _____, in Liberty _____ County, Texas.

Provide Latitude and Longitude coordinates in decimal degrees, to at least six decimal places and indicate the method was used to determine the Latitude and Longitude for the discharge point? (i.e., GPS Unit, USGS 7.5 Topographic Map, etc.)

Exact location of the groundwater discharge point(s) has not been identified; however, the coordinates for the northern and southern points of the stream segment for the West discharge points were identified by projecting a USGS 7.5 Minute Topographic Map layer in the NAD 1983 coordinate system in ArcGIS. Points (shapefile) were then assigned to the upstream and downstream locations of the stream segment and latitudinal and longitudinal values were calculated using the 'Calculate Geometry' function in ArcGIS. Attachment B provides a USGS topographical map showing stream segments within which the discharge point (s) will be located.

- 3) Location from County Seat: Approx 28 miles in a northwesterly direction from City of Houston (county seat), Harris County, Texas.

Location from nearby town (if other than County Seat): _____ miles in a _____ direction from _____, a nearby town shown on county highway map.

- 4) Zip Code: 77535

- 5) Water will be discharged into East Fork of San Jacinto _____ stream/reservoir, (tributaries) San Jacinto River Basin.

- 6) Water will be discharged at a maximum rate of 31.22 cfs (14,000 gpm).

- 7) The amount of water that will be discharged is up to 10,000 acre-feet per year.

- 8) The purpose of use for the water being discharged will be municipal, industrial, steam electric, hydro-electric, mining and oil and gas, recreation, instream and environmental, and irrigation.

- 9) Additional information required:

For groundwater

1. Provide water quality analysis and 24 hour pump test for the well if one has been conducted.

Drilling of a test well was initiated during August, 2013; however, water quality analysis or pump tests have not been completed as of date of application submittal; results will be provided prior to discharge if requested

2. Locate and label the groundwater well(s) on a USGS 7.5 Minute Topographic Map See Attachment B.

3. Provide a copy of the groundwater well permit if it is located in a Groundwater Conservation District. *Liberty County is not located within the jurisdiction of a groundwater conservation district.*

4. What aquifer the water is being pumped from? *Groundwater will be produced from the Evangeline Aquifer, part of the Gulf Coast aquifer system.*

For treated effluent *Not applicable*

1. What is the TPDES Permit Number? Provide a copy of the permit.
2. Provide the monthly discharge data for the past 5 years.
3. What % of treated water was groundwater, surface water?
4. If any original water is surface water, provide the base water right number.

**PERMIT APPLICATION COMPLETION CHECKLIST FOR
HYDROLOGY, WATER CONSERVATION, AND DAM SAFETY**

Name(s) of Applicant: *Forestar (USA) Real Estate, Inc.*

Stream, Basin, and County: *East Fork of San Jacinto and/or Luce Bayou for bed and banks conveyance from Liberty County to Houston Lake in Harris County.*

USGS 7.5 minute topographic map with all diversion points, discharge points, reservoirs, and/or land to be irrigated clearly indicated: *See Attachment B.*

Latitude and Longitude of all diversion points and/or reservoirs, including how the coordinates were determined:

Diversion amount: *No surface water will be diverted via this bed and banks authorization; however, up to 10,000 acre-feet per year of groundwater will be diverted*

Diversion rate: *No surface water will be diverted. Diversion rate for groundwater will not exceed 13,828 gpm (East Fork conveyance) or 13,902 gpm (Luce Bayou conveyance).*

Monthly Diversion Distribution (the amount of the total water that you plan to divert each month):

J F M A M J J A S O N D

Reservoir capacity and surface area: *Not applicable*

Drainage area: *Not applicable*

Request to use the bed and banks of a watercourse and/or reservoir: *See Attachment A*

Other (copy of contract for water, alternate source of water, accounting plan, etc.) *Please see Attachment D, "Special Warranty Deed" which provides evidence of Applicant's ownership of the groundwater. Water supply agreement with purchaser will include provisions for an accounting plan.*

WATER CONSERVATION PLAN - *As a wholesale water supplier, Applicant will include provisions in water supply agreements with purchasers requiring that have water conservation and drought management plans that comply with 20 TAC 281 and other applicable regulations. Water conservation and drought management plans will be submitted prior to discharge and diversion.*

1. Plan and appropriate data form
2. Please specify the quantitative goals as outlined on the data form

DAM SAFETY - *Not applicable as no reservoir is requested.*

If a reservoir is requested in the application, the following information should be submitted:

1. Surface area and capacity of the reservoir
2. Plans (with engineer's seal) for the reservoir if the dam is over 6 feet high
3. Engineer's signed and sealed hazard classification
4. Statement from engineer that the structure complies with the Chapter 299 Rules and supporting documentation

**PERMIT APPLICATION COMPLETION CHECKLIST FOR
HYDROLOGY, WATER CONSERVATION, AND DAM SAFETY**

Name(s) of Applicant: Forestar (USA) Real Estate, Inc.

Stream, Basin, and County: Orange Branch and/or Tarkington Bayou for bed and banks conveyance from Liberty County to Houston Lake in Harris County.

USGS 7.5 minute topographic map with all diversion points, discharge points, reservoirs, and/or land to be irrigated clearly indicated: See Attachment B

Latitude and Longitude of all diversion points and/or reservoirs, including how the coordinates were determined:

Diversion amount: No surface water will be diverted via this bed and banks authorization; however, up to 10,000 acre-feet per year of groundwater will be diverted.

Diversion rate: No surface water will be diverted. Diversion rate for groundwater will not exceed 13,646 gpm (East Fork conveyance) or 13,761 gpm (Luce Bayou conveyance).

Monthly Diversion Distribution (the amount of the total water that you plan to divert each month):
No surface water is to be diverted. Monthly diversion of groundwater TBD but will be exceed the volume discharge minus conveyance losses.

J F M A M J J A S O N D

Reservoir capacity and surface area: Not applicable

Drainage area: Not applicable

Request to use the bed and banks of a watercourse and/or reservoir: See Attachment A.

Other (copy of contract for water, alternate source of water, accounting plan, etc.)
Please Attachment C, "Special Warranty Deed" which provides evidence of Applicant's ownership of the groundwater. Water supply agreement with purchaser will include provisions for an accounting plan.

WATER CONSERVATION PLAN - As a wholesale water supplier, Applicant will include provisions in water supply agreements with purchasers requiring that they have water conservation and drought management plans that comply with 20 TAC 281 and other applicable regulations. Water conservation and drought management plans will be submitted prior to discharge and diversion.

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